

REMARKS

In the Office Action, the Examiner rejected claims 1-6, 8-11, 13, 16-18, 20-27, 29, and 32-46. By this paper, Applicants have amended claims 1, 2, 9, 16, 25, 33, and 36 for clarification of certain features to expedite allowance of the claims. No new matter has been added. Upon entry of these amendments, claims 1-6, 8-11, 13, 16-18, 20-27, 29, and 32-46 are pending in the present application and are believed to be in condition for allowance. In view of the foregoing amendments and the following remarks, Applicants respectfully request reconsideration and allowance of all pending claims.

Oath/Declaration

In the Office Action, the Examiner stated that the oath was defective because “[t]he oath is missing the inventors’ signature.” Office Action, page 4. Applicants respectfully remind the Examiner that the Office of Petitions has granted Applicants’ petition under 37 C.F.R. § 1.47 requesting the acceptance of an Application without the signature of all of the inventors. *See* Decision According Status under 37 C.F.R. 1.47(a) mailed January 7, 2003, a copy of which has been attached for the Examiner’s convenience. In light of this action by the Office of Petitions, Applicants respectfully submit that the oath, as filed, is sufficient.

Claim Rejections under 35 U.S.C. § 112, Second Paragraph

The Examiner rejected claims 1, 25, and 29 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. *See* Office Action, page 4.

First, with regard to claim 1, the Examiner stated that:

Claim 1, line 3 recites "...target devices recognizing a single base address", and lines 5-7 recite "each of the plurality of target devices is associated with a single base address". These two statements appear to be contradictory because one is saying the "plurality of target devices has a single address" while the other says that "each of the plurality of target devices is associated with a single base address".

Id. Although Applicants believe that claim 1, as previously presented, was sufficiently clear and definite, Applicants have amended claim 1 to address the Examiner's concerns. In particular, Applicants have amended claim 1 to recite "*associating* each of the plurality of target devices with a single base address, wherein the same single base address *associated with each of the plurality of target devices.*" (Emphasis added). In light of this amendment, Applicants respectfully request that the Examiner withdraw the pending rejection of claim 1 under Section 112.

Next, with regard to claim 25, the Examiner stated that claim 25 "recites the limitation 'the transaction request' in line 10...[and there] is insufficient antecedent basis for this limitation in the claim." Office Action, page 5. Further, with regard to claim 29, the Examiner stated that claim 29 "recites the limitation 'the computer system of claim 28' in line

1. However, claim 28 has been cancelled. It appears that Applicant meant to write 'the computer system of claim 25.'" Applicants apologize for these minor typographical errors and have corrected claims 25 and 29 in the foregoing amendments. In light of these amendments, Applicants respectfully request withdrawal of the Section 112 rejections of claims 25 and 29.

Claim Rejections under 35 U.S.C. § 102

In the Office Action, the Examiner rejected claims 1-23 and 25-31 under 35 U.S.C. § 102(e) as being unpatentable over Leung et al. (U.S. Patent No. 6,272,577, hereafter "the Leung reference") and rejected claim 32 under 35 U.S.C. § 102(e) as being unpatentable over Gupta (U.S. Patent No. 6,405,286, hereafter "the Gupta reference"). Applicants respectfully traverse these rejections.

Legal Precedent

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *See Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *See In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). That is, the prior art reference must show the *identical invention "in as complete detail as contained in the ... claim"* to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Thus, for anticipation, the cited reference must not only disclose all of the recited

features but must also disclose the *part-to-part relationships* between these features. *See* *Lindermann Maschinenfabrik GMBH v. American Hoist & Derrick*, 221 U.S.P.Q. 481, 486 (Fed. Cir. 1984). Accordingly, Applicants need only point to a single element or claimed relationship not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. A *strict correspondence* between the claimed language and the cited reference must be established for a valid anticipation rejection.

Moreover, Applicants submit that, during patent examination, the pending claims must be given an interpretation that is *reasonable* and *consistent* with the specification. *See In re Prater*, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *In re Morris*, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); see also M.P.E.P. § 2111 (describing the standards for claim interpretation during prosecution). Indeed, the *specification* is “the primary basis for construing the claims.” *See Phillips v. AWH Corp.*, No. 03-1269, -1286, at 13-16 (Fed. Cir. July 12, 2005) (citations omitted). It is usually dispositive. *See id.* Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *See In re Cortright*, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); *see also* M.P.E.P. § 2111. That is, recitations of a claim must be read as they would be interpreted by those of ordinary skill in the art. *See Rexnord Corp. v. Laliram Corp.*, 60 U.S.P.Q.2d 1851, 1854 (Fed. Cir. 2001); *see also* M.P.E.P. § 2111.01. In summary, an Examiner, during prosecution, must interpret a claim recitation as one of ordinary skill in the art would reasonably interpret the claim in view of the specification. *See In re American Academy of Science Tech Center*, 70 U.S.P.Q.2d 1827 (Fed. Cir. 2004).

Claims 1-6, 8-11, 13, 16-18, 20-23, and 26-27

Applicants respectfully assert that several features of independent claims 1, 9, 16, and 25 are not disclosed by the Leung reference. For example, independent claim 1, as amended, recites a method comprising “*associating* each of the plurality of target devices with a single base address, wherein the same single base address *associated with each of the plurality of target devices*,” and “*sending a multicast transaction to the single base address associated with each of the plurality of target devices*.” (Emphasis added). Independent claim 9, as amended, recites a method comprising “*accessing a second portion of memory...wherein the first and second portions of memory are accessed with a single base address associated with both the first target device and the second target device*.” (Emphasis added). Independent claim 16, as amended, recites a computer system comprising “*an initiator device...wherein the initiator device is configured to multicast the transaction request to the plurality of target devices using a single base address...wherein the same single base address is associated with each of the plurality of target devices*.” (Emphasis added). Independent claim 25, as amended, recites a computer system comprising “*an initiator device ...wherein the initiator device is configured to multicast the transaction request to the plurality of target devices using a single base address associated with the plurality of target devices..., wherein the same single base address is associated with each of the plurality of target devices*.” (Emphasis added).

In sharp contrast, the Leung reference discloses a memory device 100 in which memory modules 111-128 each have *their own base memory address*. *See* Leung, col. 4, lines 32-35; *see also* col. 10, lines 20-24 and Fig. 1. More specifically, the Leung reference explains that “[t]he memory modules are equipped with independent address and command decoders so that they function as independent units, *each with their own base address.*” *Id.* (Emphasis added). In other words, the Leung reference discloses using *several different base addresses* with one base memory address per device - not addressing a plurality of memory modules with the *same base address*. As such, the Leung reference cannot disclose the above-recited claim features. For at least these reasons, Applicants respectfully assert that the Leung reference cannot anticipate independent claims 1, 9, 16, and 25, as amended, or the claims that depend therefrom.

Claim 32

The Examiner rejected claim 32 under 35 U.S.C. § 102 as being anticipated by the Gupta reference. Applicants respectfully assert that several features of independent claim 32 are not disclosed by the Gupta reference. For example, claim 32 recites a computer comprising “a plurality of devices...wherein each of the devices simultaneously accesses its associated interleaved memory region *in response to a single transaction request.*” (Emphasis added). Contrary to the Examiner’s assertions, however, the Gupta reference merely discloses a system which interleaves memory such that “multiple CPUs *tend not to access* the same memory bank at the same time,” Gupta, col. 6, lines 22-25 (emphasis added). In fact, there is no mention in the Gupta reference of simultaneous accesses “*in response to the single*

transaction request," as recited in claim 32 (emphasis added). For at least this reason, Applicants respectfully assert that the Gupta reference does not disclose the above-recited features of claim 32.

Moreover, in the "Response to Arguments" section of the most recent Office Action, the Examiner cited col.16, lines 17-23 of Gupta as supporting the Examiner's rejection. *See* Office Action, page 3. In their entirety, these lines read as follows:

a memory organization having a plurality memory busses, wherein two or more memory busses can each perform independent memory transactions simultaneously, with each memory bus coupled to one or more memory bus segments, wherein only a single memory transaction can be active on a single memory bus segment at any given time, and each memory bus segment is coupled to one or more memory banks

As with the rest of the Gupta reference, there is *absolutely no mention* in the cited section of simultaneous accesses "in response to the single transaction request," as recited in claim 32. Quite the opposite, this section discloses a plurality of memory buses that can simultaneously perform independent memory transactions, but where a single memory transaction can be active on *only one of those memory buses* at any given time. *See* Gupta, col. 16, lines 17-23. As such, Applicants assert that the Gupta reference does not disclose the above-recited features of independent claim 32.

For at the least the reasons set forth above, Applicants respectfully submit that the Gupta reference does not anticipate the subject matter recited in claim 32. Accordingly,

Applicants respectfully request that the Examiner withdraw the Section 102 rejection based on the Gupta reference and allow independent claim 32.

Claim Rejections under 35 U.S.C. § 103(a)

As stated above, the Examiner rejected claims 33-38 as being unpatentable over the Gupta reference in view of the Leung reference, rejected claim 24 as being unpatentable over the Leung reference in view of Carmichael et al. (U.S. Patent No. 5,864,712, hereafter referred to as “the Carmichael reference”), and rejected claims 39-46 as being unpatentable over the Leung reference in view Olarig et al. (U.S. Patent No. 6,230,225, hereafter referred to as “the Olarig reference”). Applicants respectfully traverse these rejections.

Legal Precedent

First, the burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). The mere fact that references *can* be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d. 1430 (Fed. Cir. 1990). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of

ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985).). The Examiner must provide *objective evidence*, rather than subjective belief and unknown authority, of the requisite motivation or suggestion to combine or modify the cited references. *In re Lee*, 61 U.S.P.Q.2d. 1430 (Fed. Cir. 2002).

Claims 33-38

Applicants respectfully assert that several features of claims 33-38 are not disclosed by the Gupta reference or the Leung reference, taken alone, or in conjunction with each other. For example, independent claim 33, as amended, recites “associating the plurality of target devices with a single base memory address, *wherein the same single base memory address is associated with each of the plurality of target devices.*” (Emphasis added). Independent claim 36, as amended, recites “code to associate the single base address with a plurality of interleaved memory regions, *wherein the same single base address is associated with each of the plurality of interleaved memory regions.*” (Emphasis added).

Applicants believe that claims 33-38 are allowable because the cited references do not teach or suggest, alone or together, the claims features recited above. The Examiner conceded in the most recent Office Action that the Gupta reference “does not specifically teach associating the plurality of target devices with a single base address,” and relied on the Leung reference to disclose these features. See Office Action, page 16. However, as described above with regard to claims 1-23 and 25-31, the Leung reference does not disclose the “same

single base address,” as recited in independent claims 33 and 35. For at least this reason, it is clear that the Gupta reference and the Leung reference, taken alone or in combination, fail to teach or suggest the above-recited features of independent claims 33 and 35. As such, Applicants assert the Examiner has not established a *prima facie* case of obviousness with regard to independent claims 33 and 35.

Claims 24 and 39-46

Applicants respectfully assert that the Examiner has not established a *prima facie* case of obviousness with regard to claims 24 and 39-46. As stated above, the Examiner rejected claim 24 as obvious over the Leung reference in view of the Carmichael reference and rejected claims 39-46 as obvious over the Leung reference in view of the Olarig reference. However, as described above, the Leung reference clearly does not disclose those claim features attributed to it by the Examiner. In view of this deficiency, the Examiner’s Section 103 rejections of claims 24 and 39-46, which are based upon the Examiner’s mistaken interpretation of the Leung reference, cannot establish a *prima facie* case of obviousness. As such, Applicants respectfully request withdrawal of the Section 103 rejections of claims 24 and 39-46.

Conclusion

Applicants respectfully submit that all pending claims are in condition for allowance. However, if the Examiner wishes to resolve any other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

Date: February 14, 2006



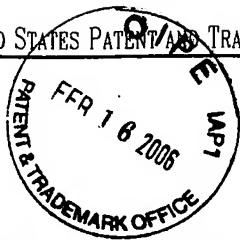
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Attachment: Decision According Status under 37 C.F.R. 1.47(a)



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JAN 07 2003

OFFICE OF PETITIONS

In re Application of :
Olarig and Cook :
Application No. 10/039,010 : DECISION ACCORDING STATUS
Filed: 31 December, 2001 : UNDER 37 CFR 1.47(a)
Attorney Docket No. H052617.1129US0:

This is in response to the renewed petition filed under 37 CFR 1.47(a) on 30 December, 2002 (certificate of mailing date 26 December, 2002).

The petition is **GRANTED**.

Petitioners have shown that non-signing inventor Pamela Cook cannot be found. Specifically, petitioners have shown that a letter was sent via first class mail to the last known addresses of the non-signing joint inventor was returned by the U.S. Post Office as undeliverable. Additionally, despite several Internet searches, the last known address of the non-signing inventor could not be determined.

This application and papers have been reviewed and found in compliance with 37 CFR 1.47(a). This application is hereby accorded Rule 1.47(a) status.

As provided in Rule 1.47(c), this Office will forward notice of this application's filing to the non-signing inventor at the address given in the Declaration. Notice of the filing of this application will also be published in the Official Gazette.

The application is being forwarded to Technology Center 3600 for examination in due course.

Telephone inquiries related to this decision should be directed to the undersigned at 703-308-6918.



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JAN 07 2003

OFFICE OF PETITIONS

In re Application of
Olarig et al.
Application No. 10/039,010
Filed: 31 December, 2001
For: SUPPORTING INTERLEAVED READ/WRITE OPERATIONS FROM/TO MULTIPLE TARGET
DEVICES

Dear Ms. Cook:

You are named as a joint inventor in the above identified United States patent application, filed under the provisions of 35 U.S.C. 116 (United States Code), and 37 CFR 1.47(a), Rules of Practice in Patent Cases. Should a patent be granted on the application you will be designated therein as a joint inventor.

As a named inventor you are entitled to inspect any paper in the file wrapper of the application, order copies of all or any part thereof (at a prepaid cost per 37 CFR 1.19) or make your position of record in the application. Alternatively, you may arrange to do any of the preceding through a registered patent attorney or agent presenting written authorization from you. If you care to join the application, counsel of record (see below) would presumably assist you. Joining in the application would entail the filing of an appropriate oath or declaration by you pursuant to 37 CFR 1.63.

Telephone inquiries regarding this communication should be directed to the undersigned at 703/308-6918. Requests for information regarding your application should be directed to the File Information Unit at 703/308-2733. Information regarding how to pay for and order a copy of the application, or a specific paper in the application, should be directed to Certification Division at 703/308-9726 or 1-800-972-6382 (outside the Washington D.C. area).

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